Menlo Park Notebook #198 [N-82-05-10]

This notebook covers the period May-June 1882. All of the entries are by Edison and consist of notes and drawings relating to iron ore separation, thermoelectricity experiments, the electric railroad, electric lighting, and storage batteries. The book contains 278 numbered pages.

Blank pages not filmed: 26, 43-49, 76-77, 82-83, 86-101, 104-109, 112-153, 156-273.

Missing page numbers: 27-42.

LIBRARY OF THE

BOARD OF PATENT CONTROL,

120 BROADWAY, NEW YORK.

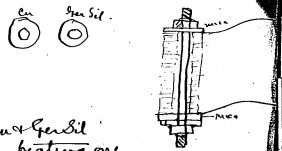
From Library
of Prosch & N.Y.

May 1, 1896

May 10 1882. 1

Experimenting on reducing iron sand to iron also mixing with Coke, charcoal, clay & tar, Crude Pet. Moulded in brix and heating sufficiently to consolidate,

Thermo Experiment



discs of Cu & Gen Sil alternated. heating one end causes heat travel to other end and there is a gradual fall of heat until the other end is scarcely hotter than in the atmosphere..
by using several thousands of these discs an exceedingly novel & Economical convertion of heat into Elect is attained

May 10 1882

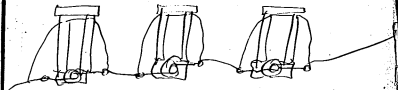
I am plating copper sheet with German Silver also other sheet of Copper with nickel. Alternately. first Copper then Exceedingly thin Coat nickel then Copper then nickel &c on until several hundred thickness is obtained the sheet is then Cut out in Circles holes drilled in Centre & ~~all~~ several discs Coated together forming thermo pile,

Today we run the Electric Railway with 3 machines in series. Each working its own field independent of the other as shown

on next page

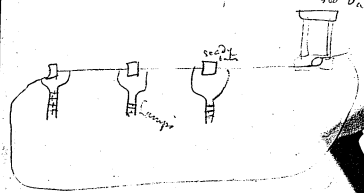
May 10 1882 Tag

John F Mc

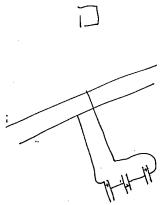


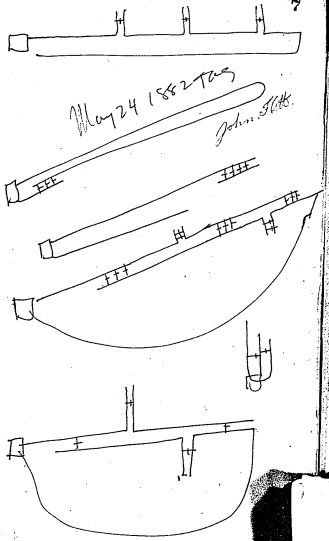
May 10 1882

Tag

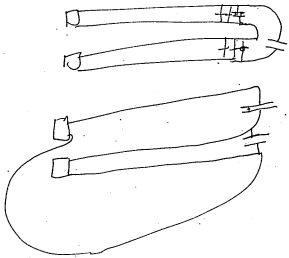


Reduce pressure by Secondary battery. No consumption




May 24 1882 Tues
John Flitt

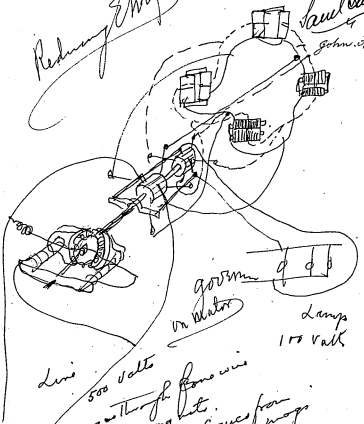
May 24 1992
Tal

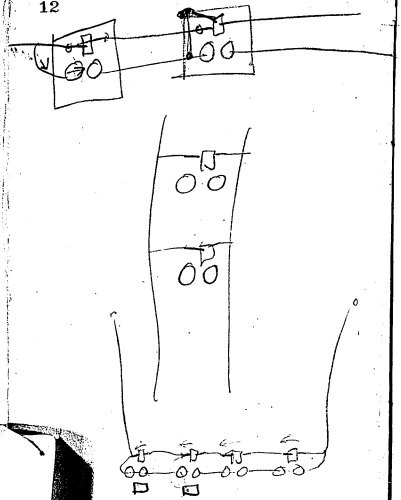


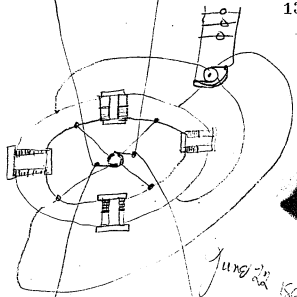
Reducing Emf May 24 1882

The Saul Dynamo

John J. Ellis





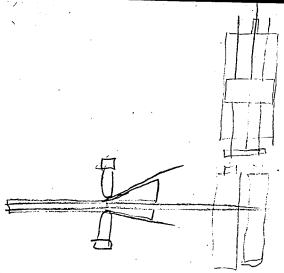


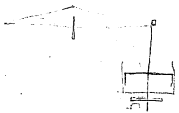
Reduction Coil
both primaries
Secondary simply wound
together the main line
Coils are of fine wire
500 to 1000 volts
while the local Service
large wire & 100 volts use

New Method preparing
lead plates for storage
consists of facing a lead
plate with an alloy of
lead & Zinc, Immerse
in SO_3 & put battery on
with paper between &
plates under pressure.
after preparation the
plates are taken out &
put in fresh cell with
$SO_3 + H_2O$. ready for use
in future —

JUNE 22 1882

Jas
Chas Fitkin
John Fitt





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90
54000
5
270,000

400.
30
12000.
15

40.

12000
3
36000
30
360,000

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30
1,080,000

270.

3

400.
32

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36000
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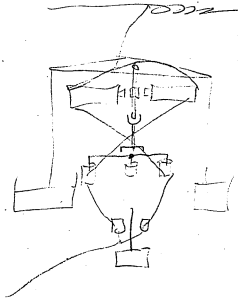
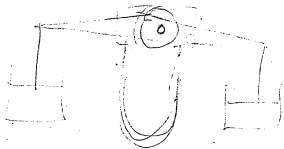
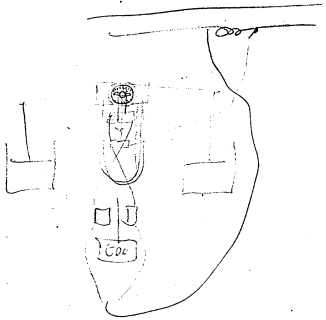




June 28 1852

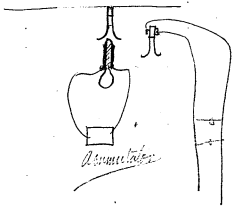
John F. Otto



June 23 1882

9.00

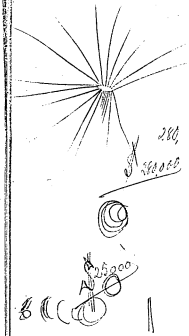
John Fitch



Just and Company

Company

Directors Trustees
Roger Franklin Esq
Dr Norrington
Dr Norrington
Treasurer Trustees



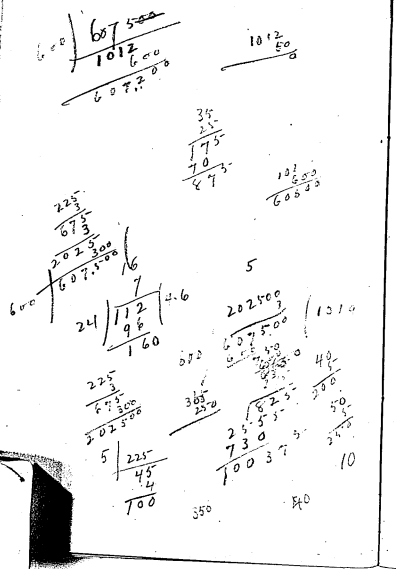
Tabbs	2500
Wright	2500
Oddins	2500
P Morgan	2500
Eaton	1,000
E.H.T.	3000
Batch	3000
Edison	5000
Benjamin	1000
Upton.	3000

5

50000

25
10
25 10

Warrington
Warrington
Warrington
Warrington
Washington
Washington
Washington
England
Williamson
England Correspondencia
Williamson
Magi Williamson
Curriculo Manuscrito
Curriculo Circulo
Curriculo Circulo



~~250 Lights~~
225-lts Battery

1 Dynamo	1350
1 Extra armature	375
1 Engine	750
1 Belting	125
	875
1 Regulator	25
1 Indicator	25
1 Photometer	12
2 Belts	25
Station	500
Foundations setting	300
Installing	150
Meters $4	50
Scale.	
Extra plates Solution Etc	25
Oil cans waste etc	10
Smoke Stack	30
Poles.	375
Setting	125
Stringing wire	200
Work	
Insulators	90
Running to Houses and Insulators etc.	150
Running Expenses	
Lamps	500
Engineer	1000
Meter Bookkeeper	800
Coal 3 hours daily (225 lights) 400 lbs	300
5 Oil meters Lamps Extras etc Repairs	250

5 miles poles

~~500 group~~ lights
only 450 used at maximum

2 dynamos	2700
1 Eclipse Armature	375
2 Engines	1500
2 Boilers	175
1 Injector	1600
1 Regulator	25
1 Indicator	25
1 Phalometer	10
3 Lights	37
Stations	500
Foundations setting	450
Insulation	~~[illegible]~~
Make slide	50 ~~[illegible]~~
Meters	~~220~~ 320
Scale	50
Extra slide vibration	25
Oil cans waste etc	10

Poles. Setting. stringing
wire -
Wire.
Insulation
Running to Houses

Running 14	[illegible]
Cans 23	1000
Engt	300
Bolt	900
Outside man Miles etc	[illegible]
800 lbs Coal per mo	600
Oil [illegible]	500

140.

16 320

6 75
5
337 50

5 / 675
1 35
20
2700

3

~~750 light~~
675 used at maximum

3 Dynamos	4050
1 Extra armature	375
3 Engines	2250
1 Boiler	2700
~~Pumps~~	200
Regulators	60
4 Belts	50
Platform	500
Foundations setting & installg	600
Circle	75
Meters	~~325~~ 500
Scale - Edison platform	85
Oil Cans & waste Etc	15
Poles setting, stringing wire	
Wire	
Insulators	
Running wire to houses	
Lamps	1500
Fixtures	1000
Foreman	450
Order man, Meter-book etc	1000
1200 Lbs coal - 3 hours work	900
Electric Repairs & Supplies	750

13050

75
9000
6750
3375
20
33

65
3000
19500
16250
13050

~~1000 Lights~~ -
900 Maximum

4 Dynamos	5400
~~Exp~~ Foundation	375
4 Engines.	3000
1 Boiler	3000
Repairs	80
Foundation	75
6 Belts.	500
~~Stokers~~	
Foundation Setting Installing	800
	100
Stoker	800
Meters	125
Scale Extra plates etc	25
Oil Cans etc	
Poles Setting Stringing wire	
Wire	
Insulators	
Running to house	

Lamps.	2000
Engr	1000
Foreman	450
General man	1000
Wireman	1250
Coal.	1000
Repairs Supplies	

200
75
00

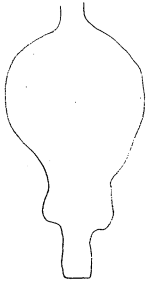
15
200
3000

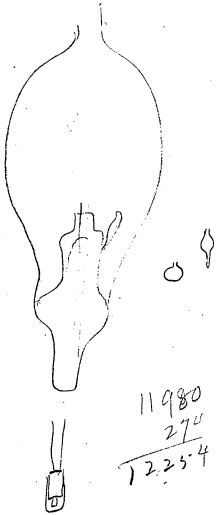
1250
1125 maximum

5 Locomotives	6 750
2 Gothamites	750
2 Large Engines	24 000
1 Switch	750
1 Boiler	3500
1 pipe	50
1 Equipment	150
7 Bells	650
Salons	1200
Foundations setting Boilers	150
Stacks	1000
Meters	160
Tools Fitting Tools Etc	35
Coal Cars	

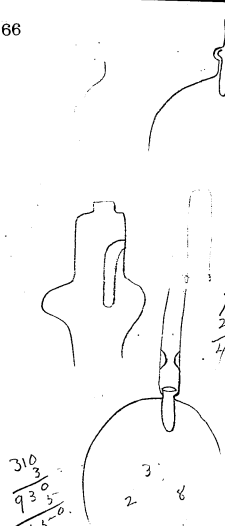
Poles setting Shingles
Wire
Insulation
Running wires to houses

Lamps	2500
Sockets	1200
Switches	500
Fitting machine	1300
Turbine Pump	1600
Canal	1300
Repairs supplies	





11980
274
12254



48
6
300
75
350
270
405

310
3
930
465

3
2 8

~~1500 Fuel~~
1350 Maximum

Salary Pellow & Cox.	150
1 Foreman	50
6 Lumbermen	810
2 Stationary	750
3 Large Engines	3600
1 Boiler	350
Repairs	4200
Repairs	125
8 Belts.	225
Station	800
Insulation Selling Etc.	1600
Insulation Selling Etc.	200
Shade	1300
Medicine	200
Books Salary Etc.	50
Coal Camp Etc.	

Sales Selling Shipping Mill.
Insulation
Running to Houses

Rent	3000
Energy	1300
Salary Man	525
General Mgr & Sty.	1750
Coal.	2100
Repairs Supplies Etc	1700

90
60
5400
15
2250
4500
6750

45
7
315
15
1575
315
472

~~1750 Lights~~
1575 approximate —

7 Dynamos	9450
2 Extra armatures	750
Skin pillows & optensils	250
3 Large 1 small Engine	4350
Pipe	750
1 Boiler	750
Pipe & fittings	200
10 Belts	275
Platform	1000
Foundation & setting	1900
5 Poles	275
Meter	1600
Scale & poles	200

Lamps	3600
Engs	1300
Gas Engs	750
Journals	575
General man & boy	1500
~~Wiring~~ miscellaneous	500
Coal	2500
Repairs Supplies &c	2500

2500
3
7500
3
2500
300
10
11750

225
12
450
225
270

1125

12
45
60

13500
12
27000
13500
162

48
54
270

12
30
360

2000 Lights
2000 Maximum

10 Dynamos	13500
2 gas animators	750
5 Gauges Engines	600
Gas fitting [illegible]	250
2 Boilers	6750
Regulators	350
12 Belts	350
Shafting	1400
Foundations settings &c	2500
Stack	350
Meters	2000
Sundries &c	500

Lamps	4500
Globes	[illegible]
Good Engineer	500
Fireman & coal	500
General man & [illegible]	1750
Contingencies	750
Coal	3400
Repairs & supplies	2000

3600
6 100
1 80
200
7200

1350
6
8100

45
12
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45
540
270
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81

2500
75
12500
17500
1875
93

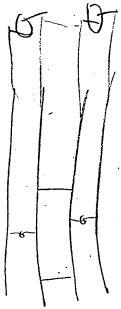
93
3
125
5 3000

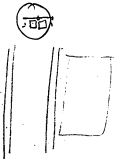
93
16
3000
5 5000
1 8 5000
3 7 3 0

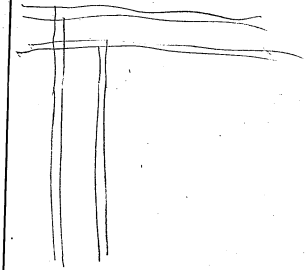
2500 Lights

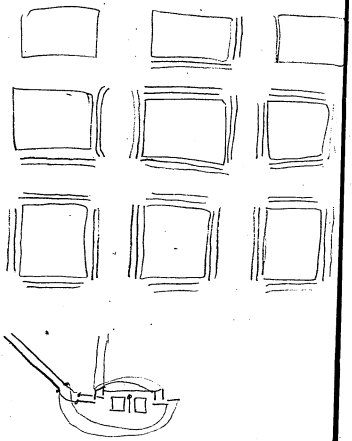
Switchboard	1500
12 dynamos	16200
2 petrol engs	300
6 Lodge Engs	7200
Extra Engine parts	300
Boilers	8500
Pipes	500
Regulations, chemicals	450
15 belts	425
Slate	1700
Foundations & settings etc	3200
Stage	450
Meters	2500
Scales etc	525
Lamps	5700
Engr	1400
Asst Engr	900
Fireman & asst	1000
General workers	1700
London & ran	800
Coal	3800
Extras Repairs Supplies	3200

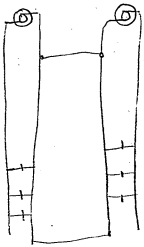
3000 Lights











65. (

40. $2\frac{1}{2}$ $1\frac{1}{7}$.

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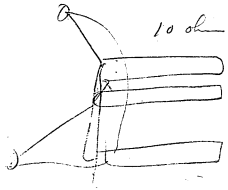
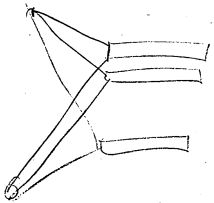

10 ohm



17 | 1760 000
220,000
26,760,000

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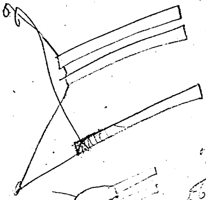

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8
10 Urban 480.

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240
240

704
6
4224

c "Chosen illuminative souls of this world"

ε = Dicting his intellect"

60

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5000.

8

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300
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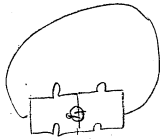
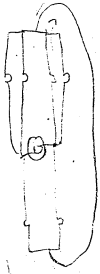
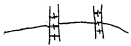
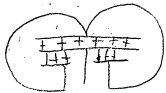
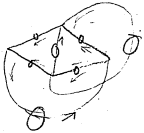
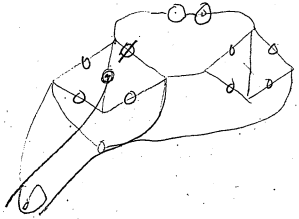
12) 6000) 12
6) 300
000

850
850
4250
6800
72250

5000
500
33) 25000,000) 76
231
190
198

76.